

## ABSTRACT OF THE DISCLOSURE

5 The present invention provides an oscillating reluctance motor which includes a rotor a center of which a rotational shaft is fixed to, and from which a pair of teeth are protruded-formed outside, said rotor teeth facing each other centering on the rotational shaft, a stator in which a cylindrical space is formed so that the rotor can rotate and first and second winding parts are formed, and a rotation control means which is installed between the rotor and a stator thus to control rotation of the rotor, wherein a first winding coil is wound on the first winding part, a second winding coil is wound on the second winding part and the first winding part and the second winding part are formed having an angle centering around the rotational shaft as a pair so that the rotor can perform periodical rotation movement.

10 There is also provided a gas compressor using an oscillating reluctance motor comprising an oscillating reluctance motor for performing periodical rotation movement of a certain angle, a connecting rod which is combined to an eccentricity part installed at one end portion of the rotational shaft in the oscillating reluctance motor, a piston which is connected to one end portion of the connecting rod and a cylinder having a space in which the piston performs reciprocating movement to compress gas.